REMARKS/ARGUMENTS

Claims 1-24 and 26-45 were pending. Claims 1, 11, 18, 29 and 42 are amended. Claim 25 was previously canceled without prejudice or disclaimer of subject matter. No claims are added.

Claims 1-4, 7-22, 26-43 and 45 stand rejected under 35 USC 103(a) as being unpatentable over Largman (US 5,057,368) in view of McGregor (US 5,571,592). Claims 5, 6, 23 and 24 stand rejected under 35 USC 103(a) as being unpatentable over Largman (US 5,057,368) in view of McGregor (US 5,571,592) and further in view of Huey (4,636,234). Claim 44 stands rejected under 35 USC 103(a) as being unpatentable over Largman (US 5,057,368) in view of McGregor (US 5,571,592) and further in view of Graham (US 6,332,234). Claims 12, 13 and 28 stand rejected under 35 USC 103(a) as being unpatentable over Largman (US 5,057,368) in view of McGregor (US 5,571,592) and further in view of Dalton (US 5,753,166).

Examiner Interview

Applicant wishes to thank Examiner Cole for courtesies extended during a telephonic interview conducted on December 16, 2004. The current rejections outlined above were discussed in view of the cited art. While no agreement was reached as to the patentability of claims, Applicants appreciate the Examiner's insight and time.

Support for amended claims

Independent claims 1, 11, 18, 29 and 42 have been amended to recite an air pocket formed within the composite material. Support for these

amendments may be found, for example, at paragraph **[022]** of the specification and Figure 2a.

§103(a) Rejections

Largman et al. (US 5,075,368)

Largman discloses a thermoplastic polymer fiber having a lobed cross-sectional shape such that the fibers have a plurality of longitudinal channels. The fiber of Largman is disclosed as having functions such as filtering, absorbing, and wicking of fluids (see, e.g., col. 10, lines 17-39).

McGregor et al. (US 5,571,592)

McGregor discloses a multiple layered insulating material comprising mcirospheres in combination with conventional fibers, wherein the microspheres are retained within the insulating material, but external to the fibers, by various means, such as entanglement, barrier layers, quilting, and use of adhesives (see, e.g., Figures 1, 3, and 11 of McGregor).

The Examiner has rejected claims 1-4, 7-22, 26-43 and 45 under 35 USC 103(a) as being unpatentable over Largman in view of McGregor. As noted at paragraph **[024]** of the specification, the polymer fibers of Largman may be utilized as the fiber material useful in the present invention. Furthermore, as noted at paragraph **[028]** of the specification, known microspheres, such as EXPANCEL, may be useful as the microcell in the present invention.

The present invention, as amended, requires not only fiber material and microspheres, but requires that the microcell be capable of engaging both an intra-fiber void and an inter-fiber void of the fiber material. Furthermore, the

present invention, as amended, requires that an air pocket may be formed when the microcell is expanded in the intra-fiber void. Neither Largman nor McGregor teach or fairly suggest either the microcells being engaged in an intra-fiber void or an air pocket being formed by this engagement. Therefore, Applicants respectfully submit, for this reason alone, as well as for the remarks that follow, that claims 1-4, 7-22, 26-43 and 45 are non-obvious over Largman in view of McGregor under the legal standards of 35 USC 103(a).

Lack of Motivation to Combine References

A. References that *can* be combined still require *motivation* to combine

The Examiner states, at page 5 of the Office Action, that "[T]he motivation to combine the fibers [of Largman] with the microspheres of McGregor is found in the fact that both references relate to insulation materials." (emphasis added) Applicants respectfully submit that this is not proper motivation to combine references. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed.Cir. 1990). In Mills, the claims were directed to an apparatus for producing an aerated cementitious composition by drawing air into the cementitious composition by driving the output pump at a capacity greater than the feed rate. The prior art reference taught that the feed means can be run at a variable speed, however the court found that this does not require that the output pump be run at the claimed speed so that air is drawn in and entrained in the ingredients during operation. Specifically, the court stated that although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." 916 F.2d at 682, 16 USPQ2d at 1432. The instant claims are analogous to the Mills case in that both the fibers and the microspheres are

known in the art. However, just because the two teachings can be combined does not necessarily provide the requisite motivation to combine the references.

B. Modifications within the ordinary skill in the art do not necessarily establish obviousness

A statement that modifications of the prior art to meet the claimed invention would have been well within the ordinary skill of the art at the time the claimed invention was made because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the reference. Ex parte Levengood, 28 USPQ2d 1300 (Bd.Pat.App. & Inter. 1993). In the present case, the Examiner has noted that Largman teaches a fiber material that may be used in the present invention while McGregor describes a microsphere that may be useful in the present invention. However, while combining the teachings of these references may be within the ordinary skill in the art, the Examiner has not shown why a person of ordinary skill in the art would be *motivated* to select the fiber material of Largman and add the microspheres of McGregor. As a matter of fact, McGregor discloses a large number of insulative layers (column 7), however, does not disclose the fiber material of Largman, even though Largman was published nearly two years prior to the filing of the McGregor patent application. This notable omission of the insulative material of Largman, or any insulative material with intra-fiber voids, suggests that one of ordinary skill in the art may not have been motivated to use the microspheres of McGregor in a fiber material having intra-fiber voids, as instantly claimed.

Modifications Render Largman Unsatisfactory for Its Intended Purpose

The Examiner, at page 5, states that "[C]ombining the references would not destroy the Largman material" because Largman also discloses insulation material. However, as previously noted, the Largman fiber material is useful not only as insulation material, but also in the fabrication of filter elements of various types of air and liquid filters and also as coverstock for absorbent materials.

While modifying the Largman fibers with the microcells of McGregor may not destroy the use of the Largman fibers as an insulation material, the modification would certainly have potential deleterious effects on the filtering and wicking properties of the fiber material of Largman. By placing microcells in the inter-fiber voids and intra-fiber voids of the fibers of Largman, channels for wicking and filtering may be blocked, thereby rendering the Largman fibers unsatisfactory for these intended purposes. It is well established that if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed.Cir. 1984).

For the plurality of reasons described above, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-4, 7-22, 26-43 and 45 as being unpatentable over Largman in view of McGregor.

Claims 5 and 6 and claims 23 and 24, being dependent from and further limiting independent claims 1 and 18, respectively, should be allowable for that reason as well as for the additional recitations each contains. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection

of claims 5, 6, 23 and 24 as being unpatentable over Largman in view of McGregor (as discussed above) and further in view of Huey.

Claim 44, being dependent from and further limiting independent claim 42, should be allowable for that reason as well as for the additional recitations it contains. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 44 as being unpatentable over Largman in view of McGregor (as discussed above) and further in view of Graham.

Claims 12 and 13 and claim 28, being dependent from and further limiting independent claims 1 and 18, respectively, should be allowable for that reason as well as for the additional recitations each contains. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 12, 13 and 28 as being unpatentable over Largman in view of McGregor (as discussed above) and further in view of Dalton.

CONCLUSION

Reconsideration and withdrawal of the rejection of claims 1-24 and 26-45 is requested. Applicant submits that claims 1-24 and 26-45 are now in condition for allowance.

In the event that the examiner wishes to discuss any aspect of this response, please contact the attorney at the telephone number identified below.

Respectfully submitted,

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